

## Abstract of the Disclosure

In a limit cycle autotuning method, the first limit cycle of alternately outputting a heat-side manipulated variable set point and a cool-side manipulated variable set point is generated. The first 5 control response corresponding to the first limit cycle is detected. The second limit cycle is generated by changing one of the heat-side manipulated variable set point and the cool-side manipulated variable set point on the basis of predetermined change instruction 10 information for instructing which one of the heat-side manipulated variable set point and the cool-side manipulated variable set point is to be changed after the first limit cycle and a predetermined manipulated variable change ratio indicating the degree of the 15 change. The second control response corresponding to the second limit cycle is detected. The control parameter for each of the heat mode and the cool mode is calculated on the basis of the detected first and second control responses. A heat/cool control apparatus is 20 also disclosed.